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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,096	03/13/2001	Gijsbert Joseph Van Den Enden	PHN 17,551	1082

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EXAMINER	
AGUSTIN, PETER VINCENT	
ART UNIT	**PAPER NUMBER**
2652	9

DATE MAILED: 06/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/787,096	Applicant(s) VAN DEN ENDEN, GIJSBERT JOSEPH	
	Examiner Peter Vincent Agustin	Art Unit 2652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 11-22* is/are rejected.

7)☒ Claim(s) *9-12* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 March 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's arguments regarding a premature final action has been carefully considered. After reviewing the Office Actions of April 26, 2004 & December 11, 2003, the finality of the Office Action mailed on April 26, 2004 is hereby withdrawn. On the Office Action mailed on December 11, 2003, claim 3 was rejected under 35 U.S.C. 102(b). On the Office Action mailed on April 26, 2004, claim 3 was rejected under 35 U.S.C. 103(a), which is a new ground of rejection. In addition, the rejections of claims 8, 11 & 12 under 35 U.S.C. 112, second paragraph were added. However, the new grounds of rejections were not necessitated by applicant's amendment. Therefore, the finality of the later Office Action has been withdrawn. A new office action, which is a final action, is as follows.

Claim Objections

2. Claims 9-12 are objected to. This objection is repeated.

In regard to claim 9, step (b) recites a step of "optionally" entering tracks in an alarm list; and step (c) recites storing the alarm list in memory "if applicable". The quoted phrases suggest that these limitations are not necessary in the claim. Furthermore, claim 11 also recites the phrase "optionally". Applicant is required to rephrase the claims in such a way as to emphasize that the features are necessary to the claims.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 8, 11 & 12 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This rejection is repeated.

Regarding claims 8 &11, the phrase "particularly a DVR disc" renders the claim indefinite because it is unclear whether the phrase is part of the claimed invention. See MPEP § 2173.05(d). Claim 12 is rejected because it is dependent upon claim 11.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3 & 13-15 rejected under 35 U.S.C. 102(b) as being anticipated by Takasago et al. (hereafter Takasago) (US 4,730,290).

In regard to claim 1, Takasago discloses a method of examining a record carrier (figure 1, element 1) for the presence of a defect, comprising: following a track to be examined and monitoring the resulting tracking signal (column 5, lines 5-20); and rating the examined recording track on the basis of characteristics of the resulting tracking signal (column 5, line 47 thru column 6, line 14).

In regard to claim 2, Takasago discloses that the examined recording track is rated as being defective if the absolute value of the tracking signal has a value which exceeds a predetermined signal threshold for a predetermined period of time or longer (column 5, line 47 thru column 6, line 14).

In regard to claim 13, Takasago discloses a method of recording information on a record carrier (figure 1, element 1), comprising: monitoring a recording track (column 5, lines 5-20) and based on the resulting tracking signal, determining whether the recording process is to be continued or discontinued (column 7, lines 6-19).

In regard to claim 14, Takasago discloses that the recording process is discontinued (column 7, lines 6-19) if the absolute value of the tracking signal appears to have a value which exceeds a predetermined signal threshold for a predetermined period of time or longer (column 5, line 47 thru column 6, line 14).

In regard to claims 3 & 15, Takasago discloses that the tracking signal has a nominal signal value of zero which corresponds to the center of a track (column 5, line 49-51), has a maximum value that corresponds to a maximum lateral deviation with respect to the center of a track (figure 3a), and a level of a preselected fraction of the maximum value (V_{REF}) is chosen as the predetermined signal threshold.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 4, 16-19, 21 & 22 rejected under 35 U.S.C. 103(a) as being unpatentable over Takasago as applied to claims 2, 14 & 15 above.

For a description of Takasago, see the rejection above. Furthermore, in regard to claims 18 & 21, Takasago discloses that the tracking signal has a nominal signal value of zero which

corresponds to the center of a track (column 5, line 49-51), and has a maximum value that corresponds to a maximum lateral deviation with respect to the center of a track, and a level of a preselected fraction of the maximum value (V_{REF}) is chosen as the predetermined signal threshold. However, Takasago does not disclose that a level of a preselected fraction of said maximum value chosen as the predetermined signal threshold is equal to approximately 0.5 or approximately 2/3. Takasago shows an unspecified maximum value and an unspecified fraction of said maximum value having order of magnitude as shown in figure 3a for a typical tracking error signal.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use a preselected fraction of approximately 0.5 or approximately 2/3 because applicant has not disclosed that using a preselected fraction of approximately 0.5 or approximately 2/3 provides an advantage, is used for a particular purpose, or solves a stated problem and the method of examining would have been expected to perform equally well within the typical tracking error signal fraction of said maximum value (V_{REF}) taught by Takasago including the claimed preselected fraction of approximately 0.5 or approximately 2/3 because all these fractions perform the same function of providing a threshold level that decides whether an examined track is defective or not.

In regard to claim 4, 16, 19 & 22, Takasago does not disclose that said predetermined period of time lies in a range from approximately 50 μs to approximately 75 μs. In regard to claims 19 & 22, Takasago does not disclose that said predetermined period of time is approximately 60 μs. Takasago shows an unspecified period of time having order of magnitude as shown in figure 3 for a typical tracking error signal.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to choose a period of time lying in a range from approximately 50 μs to 75 μs or 60 μs because applicant has not disclosed that choosing a period of time lying in this range provides an advantage, is used for a particular purpose, or solves a stated problem and the method of examining would have been expected to perform equally well within the typical tracking error signal time period taught by Takasago including the claimed time period lying in a range from approximately 50 μs to approximately 75 μs or approximately 60 μs because all these values/ranges of time period perform the same function of providing a reference time duration that decides whether an examined track is defective or not.

Furthermore, in regard to claim 17, Takasago discloses a recording device (figure 1) suitable for the recording of information on a record carrier (1) of the type comprising a multitude of concentric substantially circular recording tracks, which recording device comprises: a control unit (30); a write/read unit (4) adapted to aim a laser beam at a track of a record carrier under control of the control unit, which tracking signal has been determined on the basis of the reflected laser light (column 4, lines 41-52). The examiner views claim 17 as corresponding to previously rejected claims. For instance, the claimed write/read unit is believed to be present in the recording method and monitoring step of claim 13; and the claimed control unit, as described by claim 17, is adapted to carry out the method as claimed in claim 16. Therefore, the rejection of claim 17 is not considered a new ground of rejection.

9. Claims 5 & 6 rejected under 35 U.S.C. 103(a) as being unpatentable over Takasago as applied to claim 1 above, and further in view of Tsuchiya et al. (hereafter Tsuchiya) (JP 01253638 A).

For a description of Takasago, see the rejection above. However, in regard to claim 5, Takasago does not disclose the steps of a) examining the integrity of predetermined test tracks of the record carrier, b) examining the integrity of tracks adjacent the relevant test track each time that upon the examination a test track appears to be defective, in order to determine in this way the number of tracks affected by the same spot defect, c) entering the relevant tracks in a defect list each time that the number thus determined in the step (b) is greater than a predetermined threshold value, and d) storing the defect list in a memory.

Tsuchiya discloses the steps of a) examining the integrity of predetermined test tracks of the record carrier (purpose, line 2), b) examining the integrity of tracks adjacent the relevant test track each time that upon the examination a test track appears to be defective (constitution, lines 10-11), in order to determine in this way the number of tracks affected by the same spot defect, c) entering the relevant tracks in a defect list (constitution, lines 4-7) each time that the number thus determined in the step (b) is greater than a predetermined threshold value, and d) storing the defect list in a memory (28). Furthermore, in regard to claim 6, Tsuchiya discloses that a predetermined number of tracks between successive test tracks is skipped (purpose, lines 1-3). It would have been obvious to one of ordinary skill in the art at the time of invention by the applicant to have added the steps of Tsuchiya to the method of Takasago, the motivation being to improve reliability in checking serious defects (see purpose, line 1).

10. Claim 7 rejected under 35 U.S.C. 103(a) as being unpatentable over Takasago & Tsuchiya as applied to claim 5 above, and further in view of Hosoya (US 4,821,521).

For a description of Takasago & Tsuchiya, see the rejections above. However, Takasago & Tsuchiya do not disclose that the defect list is recorded on the examined record carrier.

Hosoya discloses storing defective sector information in an optical disc (column 6, lines 22-25). It would have been obvious to one of ordinary skill in the art at the time of invention by the applicant to have stored the defect list of Takasago & Tsuchiya to the record carrier of Hosoya, the motivation being to provide convenient non-volatile retrieval of which tracks are usable for recording.

11. Claim 8 rejected under 35 U.S.C. 103(a) as being unpatentable over Takasago & Tsuchiya as applied to claim 6 above, and further in view of Hosoya.

For a description of Takasago & Tsuchiya, see the rejections above. Furthermore, Tsuchiya discloses the step of first providing, in an examination phase, a defect list of tracks affected by a comparatively large spot defect by means of a method as claimed in Claim 6 (see claim 6 rejection above). However, Takasago & Tsuchiya do not disclose the steps of subsequently recording information on the disc in a recording phase while reference is made to said defect list, the recording tracks included in said defect list being skipped in the recording process.

Hosoya discloses recording information on the disc in a recording phase while reference is made to a defect list, the recording tracks included in the defect list being skipped in the recording process (column 2, lines 64-68; see also figure 7). It would have been obvious to one of ordinary skill in the art at the time of invention by the applicant to have added the step of skipping defective tracks during recording as suggested by Hosoya to the method of Takasago & Tsuchiya, the motivation being to eliminate wasteful recording on unrecordable tracks.

12. Claim 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Takasago & Tsuchiya as applied to claim 5 above.

For a description of Takasago & Tsuchiya, see the rejections above. However, Takasago & Tsuchiya do not disclose that approximately 50 tracks between successive test tracks are skipped. Tsuchiya discloses skipping an unspecified number of tracks.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to skip approximately 50 tracks because applicant has not disclosed that skipping approximately 50 tracks provides an advantage, is used for a particular purpose, or solves a stated problem and the method of examining would have been expected to perform equally well within the number of tracks to be skipped taught by Tsuchiya, including the claimed 50 tracks because both perform the same function of eliminating the need to examine the disc one track at a time.

Allowable Subject Matter

13. Claims 9-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and if rewritten to overcome the objections and the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

14. The following is a statement of reasons for the indication of allowable subject matter:

In regard to claim 9, no prior art of record alone or in combination discloses or suggests a method of examining for defects by rating a tracking signal further comprising the steps of: a) examining the integrity of predetermined test tracks of the record carrier; b) entering the relevant tracks in a primary defect list each time that upon the examination of a test track it appears to be defective, and **entering tracks situated in a suspect area at opposite sides of the relevant test track in an alarm list**; and c) **storing** the primary defect list and **the alarm list in a memory**.

Claims 10-12 are allowable because they are dependent upon allowable base claim 9.

Response to Arguments

15. Applicant argues that the rejection of claims 5 & 6 under 35 U.S.C. 103(a) constitutes a new rejection that was not necessitated by applicant's amendment. The examiner disagrees. Claim 5 was amended to remove the phrase "preferably by means of a method as claimed in claim 1", which changes the scope of claim 5. Prior to this change, the term "preferably" suggests that the phrase was not necessary to the claim; therefore, there was no need to include the second reference in the rejection. The amendment made it necessary to use the second reference in order to meet all the claimed features. The arguments regarding claims 7 & 8 have been covered because they depend upon claims 5 & 6.

16. Regarding claim 1, the applicant admits that Takasago teaches defect detection, but argues that Takasago does not teach rating of the track for the purpose of determining if there is a defect in the track. The argument is not persuasive because detection of a defect is inherently involved in monitoring or rating of the track for any defects.

17. Regarding claims 2 & 13, the applicant argues that while Takasago discloses determination if the light spot is on track or off track, determining whether the track is defective or not is not disclosed. The examiner disagrees because Takasago evaluates a track as being defective when an off track signal is detected.

18. Regarding claim 14, the applicant argues that there is no disclosure within Takasago that a tracking signal exceeding a predetermined value for a predetermined time results in the discontinuing of recording. The applicant admits that Takasago discloses that recording is

discontinued when an off track is read. The examiner disagrees because Takasago suggests all these limitations in column 5, line 47 thru column 6, line 14.

19. Regarding claims 3, 15, 18 & 21, the applicant argues that there is no disclosure within Takasago for taking any fractional portion of the tracking signal value that occurs at the maximum lateral deviation from the center of the track. The examiner disagrees because as shown on figure 3a, the line representing $+V_{REF}$ is clearly a fractional portion of the tracking signal.

20. Regarding claims 4, 16, 19 & 22, the applicant argues that Takasago does not disclose the recited predetermined time. The examiner disagrees because the recited predetermined time is read to be any period of time, as taught by Takasago.

Regarding the applicant's selection of 60 μs as the predetermined time, the applicant argues that a proper obviousness analysis has not been employed. The examiner disagrees because as stated on the previous action, applicant has not disclosed that choosing this value provides an advantage, is used for a particular purpose, or solves a stated problem and the method of examining would have been expected to perform equally well within the typical tracking error signal time period taught by Takasago. In addition choosing a specific value of 60 μs is an obvious matter of design choice for optimizing. Furthermore, the obviousness is based on common sense and common knowledge. (See In re Dembiczak, 175 F.3d 994, 1000, 50 USPQ2d 1614, 1618 (Fed. Cir. 1999)).

21. Regarding claims 5 & 6, the applicant argues that there is no suggestion or disclosure within Tsuchiya for providing a threshold value to determine the number of tracks that are affected by the same spot defect and only recording those defects that are at least as large as the

threshold. The examiner disagrees because although these limitations are not explicitly stated using the exact words of the applicant's claims, Tsuchiya suggests these limitations (see constitution).

22. The rejection to claims 7, 8 & 20 has been traversed because the rejection of claim 5 is allegedly in error. Since claim 5 remains rejected for the reasons given above, claims 7, 8 & 20 also remain rejected.

Conclusion

23. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Vincent Agustin whose telephone number is (703) 305-8980. The examiner can normally be reached on Monday thru Friday 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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